

United States  
Department of  
Agriculture

Forest  
Service

Arizona Zone  
Entomology &  
Pathology

2500 S. Pineknoll Dr.  
Flagstaff, AZ 86001

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File Code: 3400  
Route To:

Date: July 25, 1997

Subject: Functional Assistance to the Wilkins Rehabilitation Project, Blue Ridge Ranger District, Coconino National Forest, concerning Pinyon Ips

To: Cathy Taylor

On July 10 we examined pinyon trees located in the Wilkins Pasture, Wilkins Rehabilitation Project area. A vegetation management project is proposed in the area in order to improve watershed condition. The project, which involves thinning to remove some of the dense woody vegetation and hopefully promote understory production, raised concerns when pinyon trees infested with pinyon ips, Ips confusus (Le Conte), were observed in the area. Pinyon ips can breed in and increase populations in fresh pinyon slash and then attack and kill green standing pinyon.

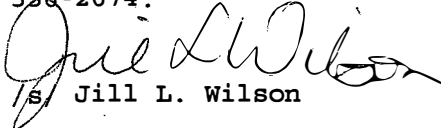
Upon examining a number of pinyons in the area, I noted a number of trees with varying levels of branch dieback as well as a few trees that are infested with pinyon ips. The branch dieback is probably a response to last years severe drought, no other signs of insects or pathogens were noted on affected branches. Trees infested with pinyon ips were scattered through the area we looked at, however there were no clumps of mortality as we often see during outbreaks present at this time. The potential for an outbreak to develop in the area is probably high however, given the density of pinyon in the area and the condition of the trees following the drought last year.

The pinyon ips is a relatively aggressive species of Ips that is found throughout the southwest, primarily on pinyon pine species, Pinus edulis and P. monophylla. Up to four generations are produced per year from April through October. Beetles are reported to overwinter under the bark of standing trees, primarily near the base. Outbreaks have occurred throughout the southwest and can be extensive. Since 1988 I've observed two outbreaks of this insect in this area. The first one occurred in the Heber-Chevelon area and resulted in mortality scattered across approximately 24,000 acres. In places the mortality was quite intense. This year an outbreak was detected in the vicinity of Twin Arrows, east of Flagstaff, that covers around 8700 acres. Outbreaks can develop quickly in association with land clearing (chaining) projects. They can also develop around homes and on other areas of intensive use and disturbance.

Treatments that create fresh pinyon debris during the spring and possibly even summer may encourage a buildup of this insect that could move into standing live pinyons. Since this is a concern, I would suggest the following options. The most conservative option would be to only remove juniper. Pinyon ips are very host specific and will rarely attack other pine species, junipers are not hosts. The next most conservation option would be to remove juniper and pinyon but restrict the harvest time to the fall months, say September-December. This would restrict harvesting activities to a time when flight activity and attacks are minimized. We use a wider "safe" period (July-December) with the ponderosa

pine ips species, however these species go through fewer generations per year (2-3) than the pinyon ips. Some other guidelines that can be useful in ponderosa pine may help, but I suspect might be difficult to implement in pinyon, such as requiring the purchaser to remove all material down to a specified diameter. With ponderosa pine, there are contract clauses that can be used to require purchasers to remove material down to a 4 inch top. Personnel on the Prescott National Forest have used this clause extensively. In pinyon, I think this method would be ineffective as the pinyon ips infests material down to 2 inches in diameter, including branches, unless purchasers would be likely to take this size material and to remove it promptly.

If you have questions concerning this letter feel free to give me a call at (520) 556-2074.



Jill L. Wilson

JILL L. WILSON  
Entomologist  
AZ Zone Entomology and Pathology

cc:  
R.Steed, Blue Ridge RD,  
J.Gonzales, Blue Ridge RD  
M.Larson, Forestry  
M.Johnson, Forestry  
J.Shafer, Forestry  
D.Parker, Forest Health  
FOR  
NM Zone Entomology and Pathology

E&P:J.Wilson:jw:7/24/97:(520)556-2074 concur: M.Frank acting for BMT 7-25-97